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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,430	05/05/2004	Hung-Lieh Hu	12898-US-PA	3429

31561 7590 04/18/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE  
7 FLOOR-1, NO. 100  
ROOSEVELT ROAD, SECTION 2  
TAIPEI, 100  
TAIWAN

EXAMINER
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GARCIA JR, RENE

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/709,430

Applicant(s)

HU, HUNG-LIEH

Examiner

Rene Garcia, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-13, 16-23 and 25-28 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 14, 15 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 05 May 2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

2. Figures 5-7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because abstract contains legal phraseology. Correction is required. See MPEP § 608.01(b).

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5. The disclosure is objected to because of the following informalities: Paragraph 0015, line 4, “a control input terminals” has grammar/spelling, perhaps “a plurality of control input terminals”; Paragraph 0015, line 7, “plurality of memory unit” grammar/spelling perhaps “plurality of memory units”.

Appropriate correction is required.

***Claim Objections***

6. Claim 14 is objected to because of the following informalities: Claim 14, line 10, clarification if “unit is” perhaps should be “units are”; claim 14, line 10, clarification if “control signal” perhaps should be “control signals”.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 7, 8, 9, 10, 11, 16-20, 22 and 25-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hu et al. (US 2003/0030687).

**Hu et al. discloses the following claimed limitations:**

\*regarding claims 1, 10, 22 and 25, inkjet printer identification circuit/75/, for providing a content stored in an inkjet print head/62/ for an inkjet printer/50/ (paragraph 0028), said inkjet print head/62/ disposed inside said inkjet printer/50/, comprising: (fig. 5 & 7; paragraphs 0026-0028)

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\*plurality of control lines/**power supply lines, 82/** (fig. 7; paragraph 0031)

\*control circuit/**76/** (fig. 7), providing a control signal to said plurality of control lines/**82/** (paragraph 0031)

\*identification module/**recognition circuit, 70/** (fig. 7), including an identification unit/**75/**, said identification unit/**75/** including at least a control input terminal/**first end, 85/** (fig. 11; paragraph 0031)), an output terminal/**signal transmission line, 79/** (fig. 7 & 11; paragraph 0030 & 0031) and at least a data input terminal/**common output end, 89/**, said data input terminal/**89/** being coupled to a memory unit/**identifying cell, 84/** (fig. 11; paragraph 0030), said control input terminal/**85/** being coupled to one of said plurality of control lines/**82/**, said identification unit/**75/** responsive to said control signal for determining and outputting the content stored in said memory unit/**84/** via said output terminal/**79/** (paragraphs 0030 – 0032; control circuit/**76/** applies a voltage to power line/**82/** connected to identifying cell/**84/** storing desired data)

\*regarding claims 2, 11 and 20, memory unit/**identifying cell, 84/** includes a fuse/**87/** (fig. 11; paragraph 0030)

\*regarding claim 7, identification module/**recognition circuit, 70/** is electrically coupled to said control circuit via a transmission line/**signal transmission line, 79/** (fig. 7 & 11; paragraph 0030 & 0031)

\*regarding claims 8, 18 and 27, plurality of control lines is power supply lines/**82/** (paragraphs 0030 & 0031)

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\*regarding claims 9, 17 and 26, plurality of control lines is address lines/**48A**/ (figs. 1 & 4; paragraphs 0004, 0006, 0007 & 0035)

\*regarding claims 16 and 25, inkjet printer identification method comprising:

\*using at least one control signal/**power supply line, 82**/ to read a content stored in at least a memory unit/**identifying cell, 84**/, wherein said memory unit/**84**/ is read via an identification unit/**identification circuit, 75**/ based on an arrangement of a signal level of said control signal (fig. 7 & 11; paragraphs 0026 – 0032: control voltage/**VA**/ is applied instead of working voltage/**VP**/)

\*regarding claims 19 and 28, content at least includes one of an ink cartridge product number, a number of inkjet nozzle, a volume of ink, a manufacturing date, a status of an ink cartridge, a type of an ink (paragraph 0028)

\*further regarding claim 25, inkjet printer identification method characterized in using a control signal to read a content stored in one of a plurality of memory units/**identifying cell, 84**/ (fig. 11; paragraph 0030)

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 3, 12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hu et al. (US 2003/0030687) in view of Dodd (US 2003/0063297).

**Hu et al. discloses all the claimed limitations except for the following:**

\*regarding claims 3, 12 and 21, memory unit includes a low-power resistor

**Dodd discloses the following:**

\*regarding claims 3, 12 and 21, memory unit/**ROM, 16A/** includes a low-power resistor/**310/** (fig. 3A; paragraphs 0018-0020, 0029 & 0032)

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize a memory unit including a low-power resistor as taught by Dodd into Hu et al. for the purpose of blowing a fusible bit related to data of a memory structure of a print head.

11. Claims 4, 13 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hu et al. (US 2003/0030687) in view of Li (US 6,871,933).

**Hu et al. discloses all the claimed limitations except for the following:**

\*regarding claims 4, 13 and 23, identification unit comprises a NAND gate, said NAND gate includes a plurality of NAND gate input terminals and a NAND gate output terminal, one of said plurality of NAND gate input terminals is coupled to said data input terminal, one of the other of said plurality of NAND gate input terminals is coupled to said control input terminal, said NAND gate output terminal is said output terminal of said identification unit

**Li discloses the following:**

\*regarding claims 4, 13 and 23, identification unit comprises a NAND gate/**logic unit, 430/**, said NAND gate includes a plurality of NAND gate input terminals and a NAND gate



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output terminal, one of said plurality of NAND gate input terminals is coupled to said data input terminal, one of the other of said plurality of NAND gate input terminals is coupled to said control input terminal, said NAND gate output terminal is said output terminal of said identification unit (fig. 4; col. 7, lines 39 & 40; col. 4, line 64-23; see also col. 3, lines 14-21 & lines 28-36)

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize an identification unit comprises a NAND gate, said NAND gate includes a plurality of NAND gate input terminals and a NAND gate output terminal, one of said plurality of NAND gate input terminals is coupled to said data input terminal, one of the other of said plurality of NAND gate input terminals is coupled to said control input terminal, said NAND gate output terminal is said output terminal of said identification unit as taught by Li into Hu et al. for the purpose of identifying the ink jet print head.

***Allowable Subject Matter***

12. Claims 5, 6, 14, 15 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: The primary reason for indicating allowable subject matter of claims 5 and 6 is the inclusion of the limitations of an inkjet printer including identification module comprises a plurality of identification units, each of said plurality of identification units comprises at least a control input terminal, an output terminal and a plurality of data input terminals, said plurality of data input terminals is coupled to a corresponding one of a plurality of memory unit respectively, said



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control input terminal is coupled to corresponding one of said plurality of control lines, said identification units are responsive to said control signals received from said plurality of control lines for determining and outputting the content stored in at least one of said plurality of memory units via said output terminal. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for indicating allowable subject matter of claims 14 and 15 is the inclusion of the limitations of an inkjet printer including identification module includes a plurality of identification units, each of said plurality of identification units includes at least a control input terminal, an output terminal and a plurality of data input terminals, said plurality of data input terminal is coupled to a corresponding one of a plurality of memory unit respectively, said control input terminal is coupled to corresponding one of a plurality of control lines, said identification unit is responsive to said control signal received from said plurality of control lines for determining and outputting a content stored in at least one of said plurality of memory units via said output terminal. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for indicating allowable subject matter of claim 24 is the inclusion of the method steps being for an inkjet printer that identification unit includes: a plurality of AND gates, each of said plurality of AND gates including a plurality of AND gate input terminals and an AND gate output terminal, one of said plurality of AND gate input terminals being coupled to one of said plurality of data input terminals, the other said plurality of AND gate input terminals

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being coupled to said control input terminal; and a NOR gate, including a plurality of NOR gate input terminals and a NOR gate output terminal, each of said plurality of AND gate output terminals being coupled to one of said plurality of NOR gate input terminals, said NOR gate output terminal being said output terminal of said identification unit. It is these steps found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

### *Conclusion*

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hu et al. (US 2004/0095409) includes a memory unit including a resistor and fuse that contains data associated with print head. Harbour et al. (US 6,325,483) includes an ink-jet pen identification circuit for increasing the amount of information to be associated with ink-jet pen.

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*Communications with the USPTO*

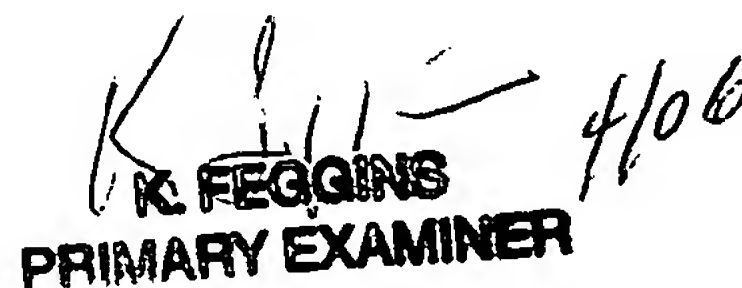
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rene Garcia, Jr. whose telephone number is (571) 272-5980. The examiner can normally be reached on M-F 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rene Garcia Jr  
04 April 2006



K. FEGGINS  
PRIMARY EXAMINER